

# STAR PROGRAMME 2018

All meetings at 2-00pm in the Keyworth Methodist Church

## Monday 5th March 2018:

**Anthony Keyworth – of the Institution of Civil Engineers (ICE)** will be giving us a talk about the lifetime work of the famous Civil Engineer...

### *‘Thomas Hawksley’*

Anthony was referred to us by Jane Clinton of the Institution of Civil Engineers (ICE). They celebrate their bicentenary in 2018 and are offering to give talks to the general public to raise awareness of important role that their engineers ‘invisible superheroes’ play in our society.

**Thomas Hawksley** was an English civil engineer of the 19th century, particularly associated with early water supply and coal gas engineering projects.

## Monday 2nd April 2018: NO MEETING – Easter Monday

## Monday 7th May 2018:

**Dr June McCombie MBE, FRSC, FInstP, FRA – From the School of Chemistry at The University of Nottingham** will be giving us a talk entitled.

### *‘Astrochemistry – The Chemical Cosmos’*

Over recent years astronomers have realised that chemistry plays a crucial role in controlling the evolutionary cycle where stars are formed from vast clouds of gas and dust, then age and then die either simply by cooling down or in the spectacular brilliance of an exploding star. With the help of chemists, they have created a new scientific discipline, astrochemistry, that seeks to understand the important role that chemistry has to play in our cosmos.

Astronomers use basically the same tools as chemical spectroscopists to look at stars linking spectrographs to their telescopes to measure the spectra of distant objects. Some objects, such as our Sun, produce relatively simple spectra showing the range of atoms present in the star. Other objects, such as low mass stars and "failed stars" or brown dwarfs, are so cool that their spectra is full of molecular fingerprints. However, in fact the spectra of all objects, as they grow older, become richer.

We see evidence for the formation of molecules in the cooler parts of the stellar envelope. These molecules can be released from the stars into the interstellar medium only to be reduced to their constituent atoms by the harsh radiation environment to be found there. So, let us take a look at how astrochemists explore a chemically controlled cosmos using the tools of a chemist and an astronomer.

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## Monday 4th June 2018:

**Adam Dury** - A Meteorologist from the *WeatherQuest Team in Norwich* – will be giving us a talk called *“Weather Forecasting in the Digital Age”*

From past to present, how the procedure and products of weather forecasting has changed over the past 30 years. Learn about the range of products supplied and a brief look into the physics of some weather systems that affect Britain.

## Monday 2nd July 2018:

Programme in progress – awaiting confirmation

## Monday 6th August 2018:

**Clive Mitchell** – Industrial Minerals Specialist at *British Geological Survey* will be giving us a talk called *“Sand, It’s in the sand...”*

Sand is sand isn't it? Sand gets everywhere but rather than a nuisance it is a valuable, high-purity raw material that makes, amongst other things, the pint glass in your hand at the bar !

Clive Mitchell, Industrial Minerals Specialist at the British Geological Survey, will be our guide on the gritty path from identifying exactly what sand is, getting it out of the ground and making it useful in foundries and fillers, to football pitches and fracking.

## Monday 3rd September 2018:

Programme in progress – awaiting confirmation

## Monday 1<sup>st</sup> October 2018:

Programme in progress – awaiting confirmation

## Monday 5<sup>th</sup> November 2018:

**Professor Neil Thomas** - *Professor of Medicinal & Biological Chemistry (School of Chemistry) University of Nottingham* – *will give a lecture covering the development of silicone polymers by Frederic Stanley Kipping FRS (1863-1949) – 1<sup>st</sup> Jesse Boot Professor of Chemistry at Nottingham.*

He will briefly include his Department's own work on spider silk and protein nanoparticles in biomedical applications at the end.